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Result
No.
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-Q=/cgn2 1/USPTC spool_p/US10614934/runat_17082005 181356 22080/app_query.fasta_1.199
-Q=/cgn2 1/USPTC spool_p/US10614934/runat_17082005 181356 22080/app_query.fasta_1.199
-DB=GenEmbl -QFMT=fastap -SUFFIX=rrge -MINMATCH=0.1 -LOOPCI=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MAXFIX=blosum62 -TRANS=human40.cdi -LIST=45
-DCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -WINLENA - NAXLEN2200000000
-USER=US10614934 @CGN 1 15600 @runat 17082005 181356 22080 -NCPU=6 -ICPU=3
-NO_MAAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                      Score
266
102
101
92.5
100.0
38.3
38.0
34.8
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Match Length DB
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Copyright (c) 1993 - 2005 Compugen Ltd.
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## ALIGNMENTS

Alignment Scores: Pred. No.: Score: Percent Similarity: Best Local Similarity: Query Match: DB:	SOURCE SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES SOURCE ORIGIN	AR359345 LOCUS DEFINITION ACCESSION VERSION
cores: ilarity: Similarity: :	Unknown. Unknown. Unclassified. 1 (bases 1 to 138) 1 (bases 1 to 38) Herman,R., Wong,J.F. Scorpion toxins Patent: US 6593141- Location/C 1. 138 /mol_type- /mol_type-	AR359345 Sequence 13 AR359345 AR359345.1
6.62e-26 266.00 100.00\$ 100.00\$ 100.00\$	Unknown. Unknown. Unknown. Unclassified. 1 (bases 1 to 138) 1 (bases 1 to 7.8) Herman,R., Wong,J.F., Lu,A.L., Presr Scorpion toxins Patent: US 6593141-A 13 15-JUL-2003; Location/Qualifiers 1138 /organism="unknown" /mol_type="genomic DNA"	AR359345 Sequence 13 from patent AR359345 AR359345.1 GI:33765592
Length: Matches: Conservative: Mismatches: Indels: Gaps:	Unknown. Unknown. Unknown. Unclassified. 1 (bases 1 to 138) 1 (bases 1 to 7.5., Lu,A.L., Presnail,J.K. and Lee,JM. Becorpion toxins Patent: US 6593141-A 13 15-JUL-2003; Location/Qualifiers 1138 /organism="unknown" /mol_type="genomic DNA"	138 bp DNA US 6593141.
138 45 0 0	J.K. and Le	linear
	.е, JМ.	PAT 17-AUG-2003

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                                                                                           GAAGGTCGTCAATTTACCAATGTTTCTTGTACCACTTCTAAGGAATGTTGGTCCGTTTGT
                                                                                                                                                    GlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGluCysIleProHisCys
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                                                                                                                                                                                                                                                                                                                              /translation="VDGSIEGRQFTNVSCTTSKECWSVCQRLHNTSRGKCMNKKCRCYS"
                                                                                                                                                                                                                                                                                                                                                    /transl_table=11
/product="charybdotoxin"
/protein_id="AAA73014.1"
/db_xref="GI:208161"
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/codon_start=1
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/db_xref="taxon:32630"
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                       20 GluCysIleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLys 39
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AX063238
AX063238.1
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Hottentotta judaica
Eukaryota, Metazoa; Arthropoda; Chelicerata; Arachnida; Scorpiones;
Buthida; Buthoidea; Buthidae; Hottentotta.
                                                                                                                                                                                                                                                                                                                                                             Scorpion toxins from buthotus judaicus Patent: WO 0078958-A 3 28-DEC-2000; E.I. DU PONT DE NEMOURS AND COMPANY (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 114)
Herman, R., Wong, J.F., Lu, A.L., Pres
Scorpion toxins
Patent: US 6593141-A 9 15-JUL-2003;
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AATTGCGTAAAACCATGCTATGATAAATACGGCACAACTAAAACTAAATGCATCAACGAT
                                                                                   MetMetIlePheCysGlnGlyGlnLysLysIleAsnTyrArgCys---AsnAsnSerGly 19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AsnTyrArgCysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThr 31
                                                        ATGGTTATTTCGAGCCACGCTCAATACGAGTTGGATGTAACGTGTATGGGAGGAGCAGAT 105
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/mol_type="genomic |
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from Patent WO0078958.
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Direct Submission
Submitted (10-JAN-2002) Martin-Eauclaire M.F., Institut Jean Roche,
UMR 6560 CNRS Universite de la Mediterranee, Bd Pierre Dramard,
F-13916 Marseille cedex 20, FRANCE
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 154)
Garcia, M.L., Koo, G.C., Leonard, R.J., Lin, C.-C.S., Stevens, S.P. and Williamson, J.M.
Scorpion peptide margatoxin with immunosuppressant Patent: US 5494895-A 5 27-FEB-1996;
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                                                                                                                                         Vacher,H., Alami,M., Legros,C., Possani,L.D., Bougis,P.E. and Martin-Eauclaire,M.F.

Novel toxins blocking A-type potassium currents: purification from venoms of diverse Androctonus species, amino acid sequence
                                                                                                                                                                                                                                                                                           Androctonus australis pa
AJ427744
AJ427744.1 GI:27652633
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                                                                                    Marcin-Eauclaire, M.F.
                                                                                                                                determination, pharmacological characterisation and gene
                                                                                                                                                                                                                      Eukaryota; Metazoa; Arthropoda; Chelicerata; Buthida; Buthoidea; Buthidae; Androctonus.
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AJ427743.1
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Martin-Eauclaire,M.F.
Martin-Eauclaire,M.F.
Movel toxins blocking A-type potassium currents: purification
Novel toxins blocking A-type potassium currents: purification
Novel toxins blocking A-type potassium currents: purification
Novel toxins blocking A-type potassium currents:
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F-13916 Marseille cedex 20, FRANCE
Location/Qualifiers
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UMR 6560 CNRS Universite de la Mediterranee, Bd Pierre Dramard
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Martin-Eauclaire, M.F.
Direct Submission
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                                                                                                                                                                                                                                                    determination, pharmacological characterisation and
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/protein id="CAD20743.1"
/db_xref="GL127652634"
/cranslation="MKPSSIILLTLLICSMSIFGNCQVETNKKCQGGSCASVCRRVIG
                         /country="Tunisia:Beni-Khedache"
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                                                          /clone="pcD-3x11"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tytgat,J., Zhu,S., Verdonck,F. and Dyason,K. Direct Submission
Submitted (25-JAN-2003) Lab of Toxicology, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhu,S., Dyason,K., Verdonck,F. and Tytgat,J. Scorpion alpha-K+ Channel Toxin Family: Molecular Scorpionary Prediction of Channel-Binding Sites
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Iurida; Scorpionoidea; Scorpionidae; Scorpioninae; Opistophthalmus
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(bases 1 to 323)
1,S., Isabelle,H., Dyason,K., Verdonck,F. and Tygat,J., 1,S., Isabelle,H., 1,
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                                                                                                                                                        subfamily 6"
                         /codon_start=1
/product="potassium channel toxin
/protein_id="AAP73820.1"
/db_xref="GI:37539452"
                                                                                                                                                                                                                                                                           /organism="Opistophthalmus
/mol_type="mRNA"
/db_xref="taxon:190115"
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VAAGKCINGRCVCYP"
                                                                                                                                                                                  note="OcKTx4; belongs to alpha-potassium channel
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/protein_id="CAD20742.1"
/db_xref="GI:27652632"
translation="MNAKFILLLLVVTTTLLPDAKGAEIIRCSGTRECYAPCQKLTG"
                                                                                                                                                                                                                        'tissue_type="venom gland"
|1. .216
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (14-MAY-1999) Department of Virology and Molecular Biology, Institute of Virology, Wuhan University, Luojia Stra Wuhan, Hubei 430072, P.R. China Location/Qualifiers
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2 (bases 1 to 288)
2 Teng, X.-C., Li, W.-X. and Zu, S.-Y.
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The cDNA sequence encoding the precursor of toxin
Chinese scorpion Buthus martensii Karsch which is
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Buthida; Buthoidea; Buthidae; Mesobuthus.
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                                                                               /codon_start=1
/product="potassium channel
/protein_id="AAQ13576.1"
/db_xref="GI:33337897"
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(Tx2) Ari

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                                           US-10-614-934-14 (1-45) x AF247058 (1-348)
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12 AsnTyrArgCysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThr
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Li, W.-X., Zhu, Z.-H.,
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zeng,X.C., Zhu,Z.H., Li,W.X., Zhu,S.Y., Peng,F., Mao, Molecular cloning and genomic organization of a K(+) from the Chinese scorpion Buthus martensii Karsch Toxicon 39 (2-3), 407-410 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Buthus martensii potassium channel AF247058
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                                                                                                                                                                                                                                                                                                                                                                                                                                                Hubei
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (19-MAR-2000) Biotechnology, Virology,
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Mesobuthus martensii
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                                                                                                                                                                                                             /product-"potassium channel toxin Bmtx2"
/protein_id="AAK73518:1"
/db_xref="G1:14794952"
/translation="MKISFLLLLAIVICSIGWTEAQFTNVSCSASSQCWPVCKKLFGT
                                                                                                                                                                                                                                                                                                                                                                      organism="Mesobuthus martensii"
|mol_type="genomic DNA"
|db_xref="taxon:34649"
                                                                                                                                                                                                                                                                                                   /product="potassium channel toxin Bmtx2"
join(22. .70,152. .279)
/note="acts on voltage-gated and high-co
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AF208300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dai,L., Wu,J.J., Gu,Y.H., Lan,Z.D., Ling,M.H. and Chi,C.W. Genomic organization of three novel toxins from the scorpion martensi Karsch that are active on potassium channels Biochem. J. 346 Pt 3, 805-809 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dai, L., Wu, J.J., (
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Arthropoda; Chelicera
Buthida; Buthoidea; Buthidae; Mesobuthus
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 AsnTyrArgCysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThr
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                                                                                                                                                                                                     /gene="TX2"
304. .372
                                                                                                                                                                                                                                                 YRGKCMNSKCRCYS"
                                                                                                                                                                                                                                                                            /product="neurotoxin TX2"
/protein_id="AAF63972.1"
/db_xref="GI:7576751"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="authority: Buthus martensii Karsch; synonym: Buthus
.martensi; common: scorpion"
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gene="TX2"
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gene="TX2"
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db_xref="taxon:34649"
                                                                                                                                                                                                                                                                translation="MKISFLLLLAIVICSIGWTEAQFTNVSCSASSQCWPVCKKLFGT
                                                                                                                                                                                                                                                                                                                                                                                               product="neurotoxin TX2"
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(TX2) S
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AATGTAAGTTGCAGTGCATCTAGTCAATGTTTGGCCGGTTTGTAAAAAGTTGTTTTGGAACG

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                                                                                                 1 (bases 1 to 120)
Garcia, M.L., Koo,G.C., Leonard,R.J.
Stevens,S.P. and Williamson,J.M.
Scorpion peptide margatoxin with im
Patent: US 5494895-A 2 27-FEB-1996;
                                                                                                                                                                                                     Sequence
I18306
I18306.1
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AX063240
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Buthida; Buthoidea; Buthidae; Hottentotta.
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                                                                                                                                                         Unclassified.
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                                                                                                                                                                                                                                                                                                                                                                          ATGACCATATGTATTAATTGCCAAGTAGAAACAAATGTGAAATGT---ACAGGTGGCTCA 102
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WO 0078958-A 5 28-DEC-2000;
EONT DE NEMOURS AND COMPANY (US
Location/Qualifiers
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/mol_type="unassigned I
/db_xref="taxon:6863"
                                                                                      Location/Qualifiers
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| mol_type="unassigned
                                                                                                                                                                                                       GI:1598661
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Patent WO0078958.
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                                                                                                                                  Leonard, R.J., Lin, C.-C.S.,
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                                                                                                                                   Slaughter, R.S.
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ORIGIN
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KEYWORDS
SOURCE
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DEFINITION
ACCESSION
                                                                                                               RESULT 15
AAU427745
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AUTHORS
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AX063254
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                            ORGANISM
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N Androctonus australis tx1 gene for toxin AJ427745
AJ427745.1 GI:27652635
toxin AaTX1; tx1 gene.
Androctonus australis (Sahara scorpion)
M Androctonus australis (Subara scorpion)
Eukaryota; Metazoa; Arthropoda; Chelicera
Buthida; Buthoidea; Buthidae; Androctonus
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AX063254
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Hottentotta judaica
Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Scorpiones;
Buthida; Buthoidea; Buthidae; Hottentotta.
                                                                                                      AAU427745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scorpion toxins from buthotus judaicus Patent: WO 0078958-A 19 28-DEC-2000; E.I. DU PONT DE NEMOURS AND COMPANY (US
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                                                                                                                                                                     CysAsnCysTyr 44
                                                                                                                                                                                                                           CysIleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThr 40
                                                                                                                                                                                                                                                                       MetMetIlePheCysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGlu 20
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                                                                                                                                                       TGCCGTTGTTAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Hottentotta
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               Arachnida;
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                 Scorpiones;
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REFERENCE
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                                                                                                                                                                                                      135 ATCTTCGGCAATTGCCAAATTGAAACAAACAAGAAATGT---CAAGGTGGATCGTGTGCT 191
                                                                   252 TECTACCCC 260
                                                                                                   43
                                                                                                                                                      23 ProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThrCysAsn 42
                                                                                                                                                                                                                                  3 IlePheCysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGluCysIle 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wacher, H., Alami, M., Legros, C., Possani, L.D., Bougis, P.E. and Martin-Eauclaire, M.F.
Novel toxins blocking A-type potassium currents: purification from venoms of diverse Androctonus species, amino acid sequence determination, pharmacological characterisation and gene structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (10-JAN-2002) Martin-Eauclaire M.F., Universite de la Mediterranee, Institut Jean Roche UMR 6560 CNRS, Bd Pierre Dramard, F-13916 Marseille cedex 20, FRANCE Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 (bases 1 to 263)
Martin-Eauclaire, M.F.
Direct Submission
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                                                                                               CYSTYRPRO 45
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join(1..66,133.
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133. .263
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/tissue_type="muscle"
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|oin(18. .66,133. .149)
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product="toxin AaTX1"
protein_id="CAD20744.1"
db_xref="GI:27652636"
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Result
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-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODEL-LOCAL -OUTFMT=pco -NORM=ext -HEARSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US10614934_GCGN_1_708_Gvunat_17082005_181356_22052_-NCPU=6 -ICPU=3
-NO_MMAP -LARGEGUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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AAQ84347
AAF27525
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Aaf27524 Scorpion
Aag84347 Synthetic
Aaf27525 Scorpion
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ADK17036	$\mathbf{r}$	AAV10093	ABL14817	AAT69937	ADI43974	AAD47486	ADD30527	ADC46664	ADB31788	ACH72306	64	3	ന	ABK49586	ABD32640	ABL08416	ADB62402	ADN95975	AAA44616	ADL13693	ADD45213	AAX20893	AAS64622	ABD32789 .	ABL29618	ABL07016 T	ABD32791 3	ADP44145	ABL19633	ABN60476	ADR13786	AAF27531	843	AAF27530	AAA48435	AAA48437	ABQ97088	27	AAQ84344	
9		Aav10093 Cellular		Coprinus	1 Plant	5 Arabic	7 Plant	4 Thalec	w	2306	Abl55644 AmEPV gen	3	Bacte	Ŧ	Abd32640 Mouse can	Abl08416 Drosophil	Adb62402 Human cDN	Adn95975 Human NOV	Aaa44616 Human sec	Adl13693 Osteoarth	Add45213 Rat gene	Aax20893 Polynucle	Aas64622 DNA encod	Abd32789 Mouse can	Abl29618 Drosophil	Ab107016 Drosophil	Continuation (4 of	24	ω	Human ca	o	_	0	0	տ	8437	œ	7532	Aaq84344 Construct	

## ALIGNMENTS

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Scorpion; charybdotoxin; potassium channel agonist; insecticidal; insect-tolerant transgenic plant; ss.
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                                                                                                                                                                                                                                                                                                                                     Leiurus quinquestriatus.
(DUPO ) DU PONT DE NEMOURS & CO E I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   potassium channel agonist Charybdotoxin cDNA
                                          98US-0110590P
                                                                                      99WO-US028351
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/product= "Charybdotoxin"
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence encodes the scorpion potassium channel agonist charybdotoxin. The toxin forms a compact structure kept rigid by three disulphide bonds. Potassium channels modulate a number of cellular events such as muscle contraction, neuro-endocrine secretion, frequency and duration of action potentials, electrolyte homeostasis and resting membrane potential. The agonist has a high affinity for the channel and may therefore act by producing an irreversible blockade of the channel and library representing mRNAs from Leirus scorpion telson tissues. The toxin is insecticidal and the CDNA sequence can therefore be used to create transgenic plants that express the toxin as a means of insect pest control. The amino acid sequence of the present toxin shows homology to the charybdotoxin artificial sequence (AAY99587)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New nucleic acid fragment en channel agonist, useful for insect-tolerant.
                                                                                                                                                                       Scorpion; tityustoxin k alpha; potassium channel agonist; insecticidal;
                                                                                                                                                                                                   Scorpion potassium channel agonist Tityustoxin k Alpha cDNA.
                                                                                                                                                                                                                                                                                        AAA48434 standard; cDNA; 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 138
                WO200032777-A2
                                                                                                                              Leiurus quinquestriatus
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                                                                                                                                                                                                                                                             AAA48434;
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                                                                                                                                                         insect-tolerant transgenic
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                                        /partial
/product= "Tityustoxin k Alpha"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          scorpion toxin that is a potassium transgenic plants that are more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lee
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Best Local Similarity:
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                                                                                                                             Scorpion; toxin; K-channel; potassium;
                                                                                                                                                        Scorpion kaliotoxin 2 precusor DNA
                                                                                                                                                                                        28-MAR-2001
                                                                                                                                                                                                                    AAF27524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence encodes the scorpion potassium channel agonist Tityustoxin k Alpha. The toxin forms a compact structure kept rigid by three disulphide bonds. Potassium channels modulate a number of cellular analysis and as muscle contraction, neuro-endocrine secretion, frequency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid fragment encoding a channel agonist, useful for creating insect-tolerant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 114 BP;
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                                           28-DEC-2000.
                                                                                                 Hottentotta judaica
                                                                                                                                                                                                                                                 AAF27524
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                                                                                                                                                                                                                                                                                                                              32 ArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyrPro 45
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                                                                                                                                                                                                                                                                                                                                                                              AsnTyrArgCysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThr 31
                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                               AATGTGCCGTGCAAGAATTCTGGACAATGTCGTCCAGTTTGCATAAAAAGAGTAAATAAT 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 41; 44pp; English.
                                                                                                                                                                                                                                                                                                        AATAGCGGAAAGTGTGGTAATGACAAATGTATTTGTTATCCA
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Matches:
Conservative:
Mismatches:
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Gaps:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         scorpion toxin that is a potassium transgenic plants that are more
                                                                                                                             insect; pesticide;
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21-JUN-2000; 2000WO-US017049

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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polynucleotides encoding scorpion venom potassium-channel agonist proteins for production e.g. of insect-tolerant transgenic plants for controlling insect pest damage and parasitic worm infections.
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Garcia ML,
                                               22-JUL-1993;
                                                                     19-JUL-1994;
                                                                                             02-FEB-1995.
                                                                                                                    WO9503065-A1
                                                                                                                                                                 Scorpion venom;
synthetic gene;
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                                                                                                                                                                                                                            25-MAR-2003
24-AUG-1995
                                                                                                                                                                                                                                                                AAQ84347;
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                       (MERI ) MERCK & CO INC.
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                                                                                                                                                                 gene;
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Koo GC,
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(first en
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                                                                                                                                                                                                 for the expression of Margatoxin gene in E. coli.
                                               93US-00096942
                                                                     94WO-US008063
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                                                                                                                                                                 oligo;
                                                                                                                                                                              Centruroides margaritatus;
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Leonard RJ,
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'n
Slaughter RS,
                                                                                                                                                                              margatoxin; MgTX;
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22
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RESULT 5
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Best Local Similari
Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Margatoxin (MgTX) is purified to homogeneity from venom of the scorpior C. margaritatus. The gene encoding MgTX is constructed and this gene is expressed in E. coli to produce recombinant MgTX. The MgTX gene was constructed using two synthetic oligos. The oligos are identical to AAQ84345 & AAQ84346 except for the 5 dCTP bases that were added to the 5'end of each to facilitate cutting with restriction enzymes. The two oligos sequences were combined to produce the gene having the coding strand on AAQ84347. Codon usage was optimised for high level expression of the coli. It includes Nail, Factor Xa, MgTX, and Hind III. (Updated on the coding strand on AAQ84347. Codon usage was optimised for high level expression than 2011. It includes Nail, Factor Xa, MgTX, and Hind III. (Updated on the coding strand on AAQ84347.
                                                                                                                                                                                                          Scorpion; toxin; K-channel;
                                                                                                                                                                                                                                   Scorpion
                                                                                                                                                                                                                                                             28-MAR-2001
                                                                                                                                                                                                                                                                                    AAF27525;
                                                                                                                                                                                                                                                                                                             AAF27525 standard; DNA; 180 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New purified scorpion venom peptide, Margatoxin - useful as a potent selective inhibitor of a voltage-dependent potassium channel as an
          WPI; 2001-071394/08
                                 Herrmann R,
                                                                                   22-JUN-1999;
                                                                                                          21-JUN-2000;
                                                                                                                                   28-DEC-2000
                                                                                                                                                          WO200078958-A2
                                                                                                                                                                                  Hottentotta judaica
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                                                                                                                                                                                                                                                                                                                                                              136
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                                                                                                                                                                                                                                                                               76 AAAGCTCAGTTCGGTCAGTCTGCTGGTGCTAAATGCATGAACGGTAAATGCAAATGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                   26 IleArgIleTyrAsnThrArgAla---AlaLysCysIleAsnLysThrCysAsnCysTyr
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                                                                                                                                                                                                                                   kaliotoxin 2 precusor DNA #2.
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                                                           PONT
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                                Lee J,
                                                                                                           2000WO-US017049
                                                                                                                                                                                                                                                            (first entry)
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91.50
58.54%
39.02%
34.40%
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                                                          NEMOURS &
                                 Wong
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                                 JF;
                                                                                                                                                                                                            potassium;
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Matches:
Conservative:
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Indels:
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                                                                                                                                                                                                            insect;
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RESULT 6
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AAQ8434
AAQ844
AAQ84
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Best Local Similarity:
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y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to scorpion toxins. The invention may be used for the creation of transgenic plants which express K-channel modifiers, useful as a means for controlling insect pests by producing insect-tolerant plants. In the prevention and/or treatment of insect pest damage and parasitic worm infections in animals and humans, the invention may also find use in creating specific new pesticides and antihelmintic drugs that are also non-toxic to humans, pets and livestock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New polynucleotides encoding scorpion venom potassium-channel agonist proteins for production e.g. of insect-tolerant transgenic plants for controlling insect pest damage and parasitic worm infections.
                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 180 BP;
                                                                                                    Garcia ML,
                                                                                                                                                                                                                                                                                                      02-FEB-1995.
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  P-PSDB; AAR66876
                                                                          Williamson JM;
                                                                                                                                                   (MERI )
                                                                                                                                                                                                    22-JUL-1993;
                                                                                                                                                                                                                                                  19-JUL-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Constructed
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24-AUG-1995
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                         1995-075021/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           103
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGTCTGCTATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene encoding scorpion margatoxin (MgTX).
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(first entry)
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                                                                                                                                                                                                    93US-00096942
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                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. .117
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32.89%
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                                                                                                  Slaughter
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18
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23
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                                                                                                    Stevens
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                                                                                                    SP;
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ARESULT 7
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Margatoxin (MgTX) is purified to homogeneity from venom of the scorpion C. margaritatus. The gene encoding MgTX is constructed and this gene is expressed in E. coli to produce recombinant MgTX. MgTX is an inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scorpion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 127 BP; 35 A; 37 C;
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                                                                                                                          New polynucleotides encoding scorpion venom potassium-channel proteins for production e.g. of insect-tolerant transgenic pl controlling insect pest damage and parasitic worm infections.
                                                                                                                                                                                                                                                                                                                                                                                  22-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scorpion; toxin; K-channel; potassium; insect; pesticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-MAR-2001
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                                                                           Claim 1; Page 48; 50pp;
                                                                                                                                                                                                                                WPI; 2001-071394/08
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                                                                                                                                                                                                                                                                                                                                   PONT DE NEMOURS &
                                                                                                                                                                                                                                                                                 Lee
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58.33%
41.67%
32.52%
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The invention relates to isolated murine polynucleotides (I) comprising contiguous stretch of at least about 60 nucleotides of a sequence (ABQ96733-ABQ99191) chosen from 1461 OWNIBANK gene trapped sequences (GTSs). The novel genes can be used in a process to identify novel
                                                                                                                                                                                                Novel murine polynucleotides that individually identify novel genes which a retroviral gene trap vector has been integrated, useful in genomic analysis and in discovery, development of therapeutic and
                                                                                                                              Claim
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01-DEC-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        under stringent conditions. (I) can be incorporated into a phage display system that can be used to screen for proteins or other ligands, that are capable of binding an amino acid sequence encoded by an oligonucleotide or polynucleotide sequence in at least one of the GTS sequences. (I) is useful in arrays, such as gene chips, to identify and characterise temporal and tissue specific gene expression, to identify the gene of interest from many sources and for genetic manipulations such as antisense inhibition and gene targeting. Decreasing the level of expression of (I) and/or down regulating the activity of peptides or proteins encoded by (I) is useful for treating development and cell differentiation disorders. Note: The sequence data for this patent did not the patent of the printed encodiffication but was obtained in the standing the sequence data for this patent did not be the printed encodiffication but was obtained in the sequence data for this patent did not be the printed encodiffication but was obtained in the patent did not be the printed encodiffication but was obtained in the patent did not be the printed encodiffication but was obtained in the patent did not be the printed encodiffication but was obtained in the patent did not be the printed encodiffication but was obtained in the patent did not be the printed encodiffication but was obtained in the patent did not be the printed encodiffication.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         not form part of the printed specification, but was obtained in electronic format directly from USPTO at segudata.uspto.gov/sequence.html?DocID=20020081668
                                     01-DEC-1999;
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The novel genes and cells are useful in functional genomic analysis
in the discovery and development of new therapeutic and diagnostic
and methods. (I) is useful for identifying the coding regions of the
                                                                                                                     WO200032777-A2
                                                                                                                                                                                                                                                             Leiurus
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                          08-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                            Scorpion; charybdotoxin; potassium channel agonist; insecticidal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scorpion potassium channel agonist Charybdotoxin cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Charybdotoxin 2. The toxin forms a compact structure kept rigid by three disulphide bonds. Potassium channels modulate a number of cellular events
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                                                                                                                                                                                                                                                                                                             Leiurus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGTATGAATAATAAATGCCGCTGTTAT 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCAGTGCATCTGATCAATGTTGGGTTGGTTTGTCAAAACTTGTATAAAACACTCAATGCA 144
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                                                                                                                                         /product= "Charybdotoxin"
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                                                                                                                                                           Scorpion; toxin; K-channel; potassium; insect; pesticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 150 BP; 43 A; 23 C;
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P-PSDB; AAY99578.
                                                                                                                                Hottentotta judaica
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             22-JUN-1999;
                                         21-JUN-2000; 2000WO-US017049.
                                                                                                   WO200078958-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                is insecticidal and the cDNA sequence can therefore be used to create transgenic plants that express the toxin as a means of insect pest
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    trol. The amino acid sequence of the present toxin shows homology to sequence of charybdotoxin from Leirus quinquestriatus (AAY99586)
                                                                                                                                                                                                                                                                                                                                         118
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                                                                                                                                                                                                                                                                               standard; DNA; 176
                                                                                                                                                                                                                                                                                                                                        AAGTGCATGAATTGGAAATGCCGCTGTTAT 147
                                                                                                                                                                                                                                                                                                                                                                                                TGTACTACATCTAAAGAATGTTGGTCGGTTTGTGAGACATTGTATAAGACCACCAGAGGA 117
                                                                                                                                                                                                                                                                                                                                                                                                                            CysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThrArgAlaAla 34
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             99US-0140227P
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Conservative:
Mismatches:
Indels:
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                            Herrman
                                                                                                                           02-DEC-1998;
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                                                                                                                                                                                                                             08-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scorpion;
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                                                                          (DUPO ) DU PONT DE NEMOURS & CO E I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 potassium channel agonist; insecticidal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PONT
                         Wong JF,
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                                                                                                                           98US-0110590P
                                                                                                                                                                            99WO-US028351
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transgenic plant; potassium channel blocking toxin 15-1;
                                                                                                                                                                                                                                                                                                                         product= "Potassium channel blocking toxin 15-1"
                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         51 A; 24 C;
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                            Presnail
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Matches:
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Indels:
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                            Lee
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RESULT 13
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Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      channels modulate a number of cellular events such as muscle contraction, neuro-endocrine secretion, frequency and duration of action potentials, electrolyte homeostasis and resting membrane potential. The agonist has a high affinity for the channel and may therefore act by producing an irreversible blockade of the channel. The nucleotide sequence was isolated from clone lst.pk0005.c5 of a cDNA library representing mRNAs from Leirus scorpion telson tissues. The toxin is insecticidal and the cDNA sequence can therefore be used to create transgenic plants that express the toxin as a means of insect pest control. The amino acid sequence of the present toxin shows homology to the sequence of potassium sequence of the present toxin shows homology to the sequence of potassium
                                                                                                                                                                                                                                                                                    Scorpion; toxin; K-channel; potassium;
                                                                                                                                                                                                                                                                                                                  Scorpion potassium channel blocking toxin 15-1
                                                                                                                                                                                                                                                                                                                                                   28-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; Page 39; 44pp; English
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                               WPI; 2001-071394/08
                                                                                                                           22-JUN-1999;
                                                                                                                                                         21-JUN-2000; 2000WO-US017049
                                                                                                                                                                                                                       WO200078958-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                AAF27531 standard; DNA; 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  channel blocking toxin 15-1 from Leirus quinquestriatus (AAY99581)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTAGTGAAGCTGGACTCATAGACGTAAGATGTTTTGCATCTCGTGAATGTTGGGAAGCT
                                                                                            PONT DE NEMOURS & CO
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                                                           Lee J,
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New polynucleotides encoding scorpion venom potassium-channel agonist

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ID ADR13786
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                                                      scorpion mar
useful as a
the Chinese
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                                                                            The invention comprises the amino acid and coding sequence of a Chinese scorpion martentoxin peptide. The martentoxin peptide of the invention useful as a potassium channel blocker. The present DNA sequence encodes
Sequence
                                                                                                                                                                                                                                                                                                                      WPI; 2002-509500/55.
P-PSDB; ADR13780, AD
                                                                                                                                                                                                                                                                                                                                                                                                        Ji Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 177
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                                                                                                                                                                                                                                                                 Martentoxin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chinese scorpion martentoxin peptide coding sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         (JIYY/) JI Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-OCT-2001; 2001CN-00131909
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                                                                                                                                                                                                                                                                                                                                                                                                     Li Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          scorpion; martentoxin; potassium channel blocker; ds; gene.
     435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGTTTCAAGGAAAATGCCAGAATAAACAATGTCGCTGTTAT 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ThrArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyr 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATAGACGTAAAATGTATTTCATCTCAAGAATGTTTGGATTGCTTGTAAAAAAGTAACTGGA 132
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                                                                                                                                                                                                                                its preparation.
                                           potassium channel blocker. The present DNA sequence scorpion martentoxin peptide of the invention.
                                                                                                                                                                                       SEQ ID NO
  B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B₽;
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148 A; 51
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G; 169 T; 0 U; 0 Other;
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Score:

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Length:
Matches:
Conservative:

598 17 9

Percent Similarity:

Alignment Scores:

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                                                  with cytostatic activity. The polymucleotide is used to produce a polypeptide, to detect differentially expressed genes correlated with a cancerous state of a mammalian cell and to inhibit tumour growth. The polymucleotide is used as a probe in mapping and tissue profiling. The encoded polypeptide and antibodies to the polypeptide can also be used for therapeutic and diagnostic purposes. The polymucleotide is useful for gene therapy. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Escobedo J, Garc
     Sequence 598 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                   New nucleic acid for producing a expressed genes correlated with
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                                                                                                                                                                                                                                                                                                                                         Claim 1;
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Search completed: August 19, 2005, 05:11:53 Job time : 436 secs	Qy 39 LYSThrCysASnCysTyrPro 45 :::       bb 54 GAGACTTGCAAAAGTCTAATTTCTTGTTATCCT 22	Qy 24 HisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsn 38	Oy 5 CysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGluCysIlePro 23	US-10-614-934-14 (1-45) x ABN60476 (1-598)	Best Local Similarity: 33.33% Mismatc Query Match: 26.32% Indels: DB: 6 Gaps:
	1 22	aLysCys1leAsn 38         AAAATGCACCACTTCATGTAAAATATCA 55	5 CysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGluCysIlePro 23		Mismatches: 13 Indels: 12 Gaps: 4

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The following repetitive elements were found in this cDNA sequence: 1-22, AT rich#Low complexity 33-257,

MER67B#LTR/MER4-group (matched compliment)
                                                                                                                                                   Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Minoru Ko,
                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 526)

NCI-CCAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Direct Submission

Submitted (17-NOV-2003) Masahira Hattori, The Institute of Physical Submitted (17-NOV-2003) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-Ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@sc.riken.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
                                                                                                                                                                                                                                             Hattori, M., Toyoda, A., Noguchi, H., BAC end Sequences of Library MSMg01
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/clone lib="NCI CGAP_PITr1"
/clone lib="NCI CGAP_PITr1"
/note="Organ: placenta; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: EcoR I; Site_2: Not I; a modified polylinker; Site_1: EcoR I; Site_2: Not I; NCI_CGAP_PITr1 is a subtracted cDNA library constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tags for this library are GTGTG, ATCAT, GGGTG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bento-soares@uiowa.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTG. For additional information, contact: Bento Soares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="mRNA"
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/tissue_type="Trophoblast"
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36.36%
29.89%
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_LIB=UI-1-CF0
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                                                                                                                                                                                                                                                                                                                            Murinae; Mus.
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ORIGIN

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KEYWORDS VERSION ACCESSION 밁 Ś 밁 Ş 밁 á

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Query Match:
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CR177814/c
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R.Site 1
R.Site 2
                                                                                                     Submitted (20-FEB-2004) Sanger Centre, Hinx CB10 1SA, UK. http://www.sanger.ac.uk/MICER Location/Qualifiers
                                                                                                                                                                                                                                                                                               CR177814.1 GI:49956663
GSS; genome survey sequence; MICER.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                    CR177814 840 bp DNA linear GSS 06-JUL-20 Forward strand read from insert in 5'HPRT insertion targeting and chromosome engineering clone MHPN416p23, genomic survey sequence.
                                                                                                                                                                                         Adams,D.J., Biggs,P.J., Cox,A.V., Davies,R.M., Jonkers,J., Smith,J., Plumb,R.W., Taylor,R.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clones are derived from the mouse BAC library MSMg01. For BAC library availability, please contact Kuniya Abe (abe@rtc.riken.jp). Tsukuba Institude, Bio Resource Center,
The Institute of Physical and Chemical Research (RIKEN) 3-1-1
Koyadai, Tsukuba, 305-0074 Japan
phone: 81-298-36-9189, fax: 81-298-36-9199
                                                                                                                                                            Direct Submission
                                                                                                                                                                           Rogers, J. and Bradley, A.
                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                  Mus musculus
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                                                                                                                                                                                                                              (bases 1 to 840)
                /mol_type="genomic DNA
/db_xref="taxon:10090"
/clone="MHPN416p23"
/clone_lib="MHPN"
                                                  organism="Mus musculus"
/mol_type="genomic DNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sub_species="molossinus"
/db_xref="taxon:57486"
/clone="MSMg01-408G22.T7"
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Rodentia;
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Sciurognathi; Muridae;
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Nishijima,I., Yu,Y.,
                                                                                                                                          Cambridgeshire,
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                                                                                                                                                                                                                                                Murinae;
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adams, D.J., Biggs, P.J., Cox, A.V., Davies, R.M., van der Weyden, Jonkers, J., Smith, J., Plumb, R.W., Taylor, R.G., Nishijima, I., Y Rogers, J. and Bradley, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (20-FEB-2004) Sanger Centre, Hinxton, CB10 1SA, UK. http://www.sanger.ac.uk/MICER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
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TGTAATTGCTTT 639
                   CysAsnCysTyr 44
                                                        TGTTTCCCATTTTGTGTGGGAAGATATAATCCCATCTTCTATAATTGCCAACTAGTAAAT
                                                                                                                 TITCCTCCAGGACAGAAAGCCCTTCCTTTGAAATGTAAATCATCAAAAAATTTTGGCGTC 711
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                                                                                  CysIleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThr 40
                                                                                                                                       PheCysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSer-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             # genome survey sequence; MICER.
# musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/mol type="genomic DNA"
/db xref="taxon:10090"
/clone="MHPN333h07"
/clone_1ib="MHPN"
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Conservative:
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JOURNAL
                                                                     JOURNAL
                                                                                Eukaryota; Metazoa; Chordata; Crani
Mammalia; Eutheria; Rodentia; Sciur
1 (bases 1 to 874)
Adams,D.J., Biggs,P.J., Cox,A.V., D.
Jonkers,J., Smith,J., Plumb,R.W., T.
Rogers,J. and Bradley,A.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                  661
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                                                                                                                                                                                                                                                                                   UK257546 874 bp DNA linear GSS 06-JUL-20 Forward strand read from insert in 5'HRRT insertion targeting and chromosome engineering clone MHPN248m09, genomic survey sequence. CR257546
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Adams, D.J., Biggs, P.J., Cox, A.V.,
Jonkers, J., Smith, J., Plumb, R.W.,
Rogers, J. and Bradley, A.
Direct Submission
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Forward strand read from insert in 5'HPRT insertion targeting an
chromosome engineering clone MHPN98f06, genomic survey sequence.
                                              Submitted (20-FEB-2004) Sanger Centre, Hinxton, CB10 1SA, UK. http://www.sanger.ac.uk/MICER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                               GSS; genome survey sequence; MICER.
                                                                                                                                                                                                                                                                     CR257546.1 GI:50036399
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Mus musculus (house mouse)
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                                                                                                                                                                                                                              Mus musculus (house mouse)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTCCTCCAGGACAGAAAGCCCTTCCTTTGAAATGTAAATCATCAAAAAATTTTTGGCGTC 722
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="MHPN98f06"
organism="Mus musculus"/
                          Location/Qualifiers
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Taylor,R.G.,
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Taylor, R.G.,
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Nishijima,I., Yu,Y.,
                                                                                                                     van der Weyden, L.,
Nishijima, I., Yu, Y
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JOURNAL COMMENT
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CK173729
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Best Local Similarity:
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TITLE
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CK173729
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Nene, V., Quackenbush, J., George, J. and Guerrero, F. An index of genes transcribed in the tick Boophilus microplus Unpublished (2004)
Other ESTs: EST763048
Contact: Vishvanath Nene
                                                                                                                                                                                                                                                                                                                                                                           Parasite Genomics
The Institute for Genomic Research
9712 Medical Center Drive, Rockvill
Tel: 301-610-5968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST763049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Parasitiformes; Ixc
1 (bases 1 to 769)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Boophilus microplus (southern cattle tick)
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                                                                                                                                                                                                                                                                                                                                                             301-838-0208
                                                                                                                                                                                                                                                                                                                                           nene@tigr.org
                                                                                       /dev_stage="Adult and larvae"
/lab host="E. coli strain DH10B-TonA"
/lab host="E. coli strain DH10B-TonA"
/clone lib="BEA"
/clone lib="BEA"
/note="Organ: Whole ticks and dissected organs; Vector:
/EXPRESS 1; A normalized cDNA library was custom bullt by
Express Genomics. Oligo-dT primed cDNA was directionally
cloned into NotI-EcoRV site of pExpress 1. Universal M13
primers were used to generate 5' and 3' EST data."
                                                                                                                                                                                                                                            /organism="Boophilus microplus"
/mol_type="mRNA"
/db_xref="taxon:6941"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="MHrN270"""
/clone_lib="MHPN"
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/db_xref="taxon:10090"
/clone="MHPN248m09"
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AG586472/c
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                                                                                                                               No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Sushiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, J (E-mail:hattori@gsc.riken.jp, URL:http://hpp.gsc.riken.go.jp/. Tel:81-45-503-911), Fax:81-45-503-9170)
Clones are derived from the mouse BAC library MSMg01. For BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 library availability, please contact Kuniya Abe Tsukuba Institude, Bio Resource Center, The Institute of Physical and Chemical Research Koyadai, Tsukuba, 305-0074 Japan phone: 81-298-36-9189, fax: 81-298-36-9199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus molossinus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (17-NOV-2003) Massahira Hattori, The Institute of Physical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus
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LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e-mail: abe@rtc.riken.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hattori, M., Toyoda, A., Noguchi, H., Kojima, T. and Sakaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hattori,M., Toyoda,A., Noguchi,H., Kojima,T.
BAC end Sequences of Library MSMg01
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 (1-45)
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: EcoRI
: EcoRI.
Location/Qualifiers
                                                                                                                                                                                                                                                                           /organism="Mus musculus mo/mol_type="genomic DNA"
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/sub_species="molossinus"
/db_xref="taxon:57486"
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                                                                                                                                                                                                                                        sex="male"
                                                                                                                                                                                                                                                         clone="MSMg01-513N13.TJ"
                                                                                                                                                                                                                                                                                                                                                     .794
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est_c_virginica416 Cv Hemo 4hr Immune Forward SSH Crassostrea
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CV087408
                                         CV087152 345 bp
CV rirginical86 Cv Hemo Cadmium
CDNA, mRNA sequence.
CV087152
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1 (bases 1 to 187)
Jenny, M.J., Warr, G.W., Gross, P.S., Almeida, J.S., Chen, Y.
MCKillen, D.J., Wu, S. and Chapman, R.W.
Crassostrea virginica EST Library at marinegenomics.org
Unpublished (2004)
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Crassostrea virginica (eastern oyster)
                            CV087152.1
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843 792 4850
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                                                                                                                                                                                                                                                                                                                                                                                          /ceIl_type="Hemocyte"
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1 (bases 1 to 345)
Jenny, M.J., Warr, G.W., Gross, P.S., Almeida, J.S., Chen, Y., McKillen, D.J., Wh., S. and Chapman, R.W.
Crassostrea virginica EST Library at marinegenomics.org
Unpublished (2004)
                                                                                                                                                                             Department of Biochemistry and Molecular Biology
Medical University of South Carolina
Box 250509, 173 Ashley Avenue, Charleston, SC 29
                                                                                                                                                                                                                                                       Ostreoidea; Ostreidae; Crassostrea.

1 (bases 1 to 345)
Jenny, M.J., Warr, G.W., Gross, P.S., J
McKillen, D.J., Wu, S. and Chapman, R.I
Crassostrea virginica EST Library at
Unpublished (2004)
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Fax: 843 792 4850
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Medical University of South Carolina
Box 250509, 173 Ashley Avenue, Charleston, SC 29
                                                                                                                      Email: grossp@musc.edu
                                                                                                                                                                                                                                       Contact: Gross PS
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virginica cDNA, mRNA sequence
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                                                                                                                                                                                                                                                                                                                                                                                          Department of Biochemistry and Molecular Biology Medical University of South Carolina Box 250509, 173 Ashley Avenue, Charleston, SC 29
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Ostreoidea; Ostreidae; Crassostrea.
1 (bases 1 to 345)
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Location/Qualifiers
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/note="Vector: pCR2.1; Site_1: none; Site_2: none"
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                                                   GACCCACATTCTGGA 273
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Percent Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120 TGCAACAACAATGCTGATTGTTCCGCCCACTGC
                                                                                                                                                                                                                                               pgnic.pk018.o12 Chicken lymphoid cDNA linear EST 10-JAN-2003 cDNA clone pgnic.pk018.o12 5' similar to no significant hits (pLog(P) 4), mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                               72 ACTTGTATCAACAACCAATGCCACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 35 LysCysIleAsnLysThrCysAsnCys 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15 CysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThrArgAlaAla 34
                                                                        Eukaryota; Metazoa; Chordata; Archosauria; Aves; Neognathae; Phasianinae; Gallus.
1 (bases 1 to 623)
Morgan,R.W. and Burnside,J.
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Jenny, M.J., Warr, G.W., Gross, P.S., Almeida, J.S.,
McKillen, D.J., Wu, S. and Chapman, R.W.
Crassostrea virginica EST Library at marinegenomi
Unpublished (2004)
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Contact: Robin W. Morg
University of Delaware
                                    Chicken ESTs from lymphoid Unpublished (2002)
                                                                                                                                                                          Gallus gallus (chicken)
Gallus gallus
                                                                                                                                                                                                                  EST
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EST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: 846 792 8503
Fax: 843 792 4850
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Medical University of South Carolina
Box 250509, 173 Ashley Avenue, Charleston, SC 29
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Ostreoidea; Ostreidae; Crassostrea.
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/db xref="taxon:6565"
/db xref="texon:6565"
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/ceIl_type="Hemocyte"
/clone_llb="Cv Hemo 4hr Immune Reverse SSH"
/note="Vector: pCR2.1; Site_1: none; Site_2: none"
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                    W. Morgan
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                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae;
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                                                                                   cDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCM1316 row: i column: 21 High quality sequence steart: 9 High quality sequence steart: 9 LCCM1311 yearners steary: 678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG420272 967 bp mRNA linear EST 14-M
602448285F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:4588972
                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 967)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
BG420272
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                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
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/organism="Homo sapiens"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Gallus gallus"
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note="Vector: pCMVSPORT 6"
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lab_host="E.coli EMDH10B"
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sex="Male and Female"
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Best Local Similarity:
Query Match:
Search completed: August 19, Job time : 3114 secs
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                                                                                                   726 -----TGTTGTCGGTTTTCATACACACGGGCA 700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="renal cell adenocarcinoma"
/lab host="PH10B (phage-resistant)"
/clone lib="NIH MGC 14"
/clone lib="NIH MGC 14"
/note="Organ: kīdney; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT prinning. Directionally cloned into EcoRX/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
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Mismatches:
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-Q-/cgn2_1/USPTO_spool_p/US10614934/runat_19082005_112037_24047/app_query.fasta_1.199
-Q-/cgn2_1/USPTO_spool_p/US10614934/runat_19082005_112037_24047/app_query.fasta_1.199
-DB=IBSUEd_PatenTs_NA -OFMT=fastap -SUFFIX=rni -MINMATCH=0.1 -LOOPCI=0
-LOOPEXT=0 -UNITS=Dits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN-0 -ALIGN=15
-MODE=LOCAL -OUTFWT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER-US10614934_GCGN_1 1_105 Grunat_19082005_112037_24047 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-PGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Perfect score:
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BB
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Ygapop 10.0 , y
Fgapop 6.0 , F
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1: /cgn2_6/ptcdatta/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptcdatta/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptcdatta/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptcdatta/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptcdatta/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptcdatta/1/ina/DackfIles1.seq:*
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Maximum Match 100%
Listing first 45 summaries
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US-10-044-359-3

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US-09-857-401B-13
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255		1400,		Sequence 17, Appli Sequence 2, Appli Sequence 11817, A Sequence 15439, A Sequence 5432, Ap Sequence 20714, A Sequence 51773, A Sequence 12872, A Sequence 13239, A Sequence 7, Appli Sequence 78, Appli

## ALIGNMENTS

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Percent Similarity:
Best Local Similarity:
Query Match:
US-10-614-934-14 (1-45) x US-09-857-401B-13 (1-138)
                                                                                                                           Alignment Scores:
                                                                                                                                                          US-09-857-401B-13
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: HERNMANN, I APPLICANT: WONG, JABER APPLICANT: LU, ALBER APPLICANT: PRESNAIL, APPLICANT: LEE, JIAN
                                                                                                                                                                                                                       SOFTWARE: Microsoft Office 97
SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 13, Application US/09857401B Patent No. 6593141
                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/110,590 PRIOR FILING DATE: 1998-12-02 NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                                                                                                                                  FILE REFERENCE: BB1102
CURRENT APPLICATION NUMBER: US/09/857,401B
CURRENT FILING DATE: 2001-06-01
                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: SCORPION TOXINS
                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                         ORGANISM: Leiurus
                                                                                                                                                                                                                                                                                                                                                                 WONG, JAMES F.
LU, ALBERT L.
PRESNAIL, JAMES K.
LEE, JIAN-MING
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100.00%
                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
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20

Result

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GENERAL INFORMATION:
APPLICANT: Herrman, Rafael
APPLICANT: Herrman, Rafael
APPLICANT: Wong, James F.
APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
PRIOR APPLICATION NUMBER: 09/599,416
PRIOR FILING DATE: 2000-06-22
PRIOR PRICATION NUMBER: 60/140,227
PRIOR FILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28
SOFTWARE: Microsoft Office 97
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DB:
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Best Local Similarity:
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SEQ ID NO 3
LENGTH: 186
TYPE: DNA
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CURRENT APPLICATION UNMBER: US/09/857,401B
CURRENT FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: HERRMANN, RAFAEL APPLICANT: WONG, JAMES F. APPLICANT: LU, ALBERT L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: SCORPION TOXINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 114
TYPE: DNA
ORGANISM: Leiurus quinquestriatus
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PRESNAIL, JAMES K.
LEE, JIAN-MING
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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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US-08-096-942-5
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US-08-096-942-5
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                                                               TELEX: 138825
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 154 base pairs
TYPE: nucleic acid
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APPLICANT: GARCIA
                                                                                                                                                                                                                                                                                                                                      ZIP: 07065-0907

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DDS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 18
TELECOMMUNICATION INFORMATION: (908) 594-4283
                                                                                                                                                                                                                                CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DOLAN, CATHERINE A
REGISTRATION NUMBER: 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: STEVENS, SCOTT P
APPLICANT: WILLIAMSON, JOANNE M
TITLE OF INVENTION: SCORFION PEPTIDE WITH IMMUNOSUPPRESSANT
TITLE OF INVENTION: ACTIVITY
              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
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                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/096,942 FILING DATE: 22-JUL-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: RAHWAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
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                                   TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LEONARD, REID J
LIN, CHIU-CHUAN S
SLAUGHTER, ROBERT S
STEVENS, SCOTT P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                         (908) 594-4720
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KOO, GLORIA C
                                     linear
                                                  single
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Indels:
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Alignment Scores: Pred. No.:
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Best Local Similarity:
Query Match:
   Percent Similarity:
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TELEX: 138825
INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: BIGLEY, FRANK P.
REGISTRATION NUMBER: 36356
REFERENCE/DOCKET NUMBER: 1895
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-1249
TELEFAX: (908) 594-4720
                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PM PC -DOS/MS-DOS
SOFTMARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: PCT/US94/08063
FILING DATE: 22-UUL-1993
CLASSIFICATION:
                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SCORPION PEPTIDE WITH IMMUNOSUPPRESSANT TITLE OF INVENTION: ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
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                                                                                                              STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                          TYPE: nucleic acid
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ZIP: 07065-0907
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STREET: P.O. BOX 2000,
CITY: RAHWAY
STATE: NEW JERSEY
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LEONARD, REID J
LIN, CHIU-CHUAN S
SLAUGHTER, ROBERT S
STEVENS, SCOTT P
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                                                                                                                linear
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Matches:
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Matches:
Conservative:
Mismatches:
Indels:
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; Sequence 2, Applicat
; Patent No. 5494895
; GENERAL INFORMATIO
; APPLICANT: GARC
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Best Local Similarity:
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APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
PRIOR APPLICATION NUMBER: 09/599,416
PRIOR FILING DATE: 2000-06-22
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 60/140,227
PRIOR FILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28
SOFTWARE: Microsoft Office 97
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Herrman, Rafael APPLICANT: Wong, James F. APPLICANT: Lee, Jian-Ming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Hottentotta judaica
APPLICANT:
APPLICANT:
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                                                                   INFORMATION:
                                                                                                                                                                                                                                                                 21 CysIleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThr 40
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                                                                                                 Application US/08096942
GARCIA, MARIA L
KOO, GLORIA C
LEONARD, REID J
LIN, CHIU-CHUAN S
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40.00%
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GENERAL INFORMATION:

APPLICANT: Herrman, Rafael

APPLICANT: Wong, James F.

APPLICANT: Wong, James F.

APPLICANT: Lee, Jian-Ming

ITITLE OF INVENTION: SCORPION TOXINS

FILE REFERENCE: BB1367 US NA

CURRENT APPLICATION NUMBER: US/10/044,359

CURRENT FILING DATE: 2002-01-11

PRIOR APPLICATION NUMBER: 09/599,416

PRIOR FILING DATE: 2000-06-22
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; Sequence 19, Application US/10044359
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Best Local Similarity:
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                                                                                                                                                                                                      Patent No. 6740743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: DOLAN, CATHERINE A
REGISTRATION NUMBER: 36502
REFERENCE/DOCKET NUMBER: 1895
TELECOMMUNICATION INFORMATION:
TELEPHONE: (908) 594-4283
TELEPHONE: (908) 594-4720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: 138825
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/096,942
FILING DATE: 22-JUL-1993
CLASSIFICATION: 435
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TITLE OF INVENTION: ACTIVITY
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: CATHERINE A. DOLAN, MERCK & CO., INC.
STREET: P.O. BOX 2000, 126 LINCOLN AVENUE
CITY: RAHWAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 120 base pairs
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Мо.:
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STRANDEDNESS: single
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OPERATING SYSTEM: PC-DOS/MS-DOS
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ZIP: 07065-0907
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                                                                                                                                                                                                                                                                                                          67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1: 120 base pairs nucleic acid
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WINTION: SCORPION PEPTIDE WITH IMMUNOSUPPRESSANT
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Conservative:
Mismatches:
Indels:
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Percent Similarity:
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                             US-10-614-934-14 (1-45) x US-09-857-401B-15 (1-180)
                                                                            Query Match:
                                                                                                                                           Pred. No.:
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                                                                                                                                                        Alignment Scores:
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PRIOR FILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28
SOFTWARE: Microsoft Office 97
SEQ ID NO 19
                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/857,401B
CURRENT FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Microsoft Office 97
SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15, Application US/09857401B Patent No. 6593141
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APPLICANT: WONG, JA
APPLICANT: LU, ALBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: unsure
LOCATION: (9)
FEATURE:
NAME/KEY: unsure
LOCATION: (88)
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                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: LEE, JIAN-MING TITLE OF INVENTION: SCORPION TOXINS
                                                                                                                                                                                                  TYPE: DNA ORGANISM: Leiurus quinquestriatus
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15 CysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThrArgAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 CyslleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThr 40
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PRESNAIL, JAMES K.
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78.00
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43.33%
29.32%
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86.50
52.27%
38.64%
32.52%
                                                                            Conservative: Mismatches: Indels:
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                                                            Gaps:
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; TYPE: DNA ; ORGANISM: Hottentotta judaica US-10-044-359-15
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Best Local Similarity:
Query Match:
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                                                                   SOFTWARE: Microsoft Office 97
SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                    Sequence 15, Appl:
Patent No. 674074:
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                                                                                                  PRIOR APPLICATION NUMBER: 09/599,416
PRIOR FILING DATE: 2000-06-22
PRIOR APPLICATION NUMBER: 60/140,227
PRIOR FILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28
                                                                                                                                                                                       TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
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PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                APPLICANT: Herrman, Rafael APPLICANT: Wong, James F. APPLICANT: Lee, Jian-Ming
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TITLE OF INVENTION: SCORPION TOXINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: HERRMANN, RAFAEL APPLICANT: WONG, JAMES F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: BB1102
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ORGANISM: Leiurus
                                                     ENGTH: 176
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                                                                                                                                                                                                                                                                                                                   INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThrArgAlaAla
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PRESNAIL, JAMES K.
LEE, JIAN-MING
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Lee, Jian-Ming
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US-10-044-359-17; Sequence 17, Application US/10044359; Patent No. 6740743
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Best Local Similarity:
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APPLICANT: Herrman, Rafael
APPLICANT: Wong, James F.
APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,35;
CURRENT FILING DATE: 2002-01-11
PRIOR APPLICATION NUMBER: 09/599,416
                                                                                                                                               GENERAL INFORMATION:
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SEQ ID NO 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/857,401B
CURRENT FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: LU, ALBERT L.
APPLICANT: PRESNALL, JAMES K.
APPLICANT: LEE, JIAN-MING
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1102
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Leiurus quinquestriatus
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                                                                                                                                                                                                                                                                                   CysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyr 44
                                                                                                                                                                                                                                                       TGCAGAAAAGTAACAGGATCGGGACAAGGAAAATGCCCAGAATAATCAATGTCGCTGCTAT 174
                                                                                                                                                                                                                                                                                                                              TGTAGTGAAGCTGGACTCATAGACGTAAGATGTTTTGCATCTCGTGAATGTTGGGAAGCT 114
                                                                                                                                                                                                                                                                                                                                                              CysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGluCysIleProHis
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Matches:
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PRIOR FILING DATE: 2000-06-22
PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28

60/140,227

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PCT-US94-08063-2
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Best Local Similarity:
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; TYPE: DNA
; ORGANISM: Hottentotta judaica
US-10-044-359-17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                TELEX: 138825
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: BIGLEY, FRAK P.
REGISTRATION UNMBER: 36356
REFERENCE/DOCKET NUMBER: 1895
TELECOMMUNICATION INFORMATION:
TELEPRAK: (908) 594-1249
TELEFAX: (908) 594-4720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: FRANK P. BIGLEY, MERCK & CO., INC
STREET: P.O. BOX 2000, 126 E. LINCOLN AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: WILLIAMSON, JOANNE M
TITLE OF INVENTION: SCORPION PEPTIDE WITH IMMUNOSUPPRESSANT
TITLE OF INVENTION: ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 22-JUL-CLASSIFICATION:
                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: RAHWAY
STATE: NEW JERSEY
                   TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                              ENGTH:
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                H: 127 base pairs nucleic acid
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SLAUGHTER, ROBERT S
STEVENS, SCOTT P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEONARD, REID J
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Best Local Similarity:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-949-016-11817
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                                                                                                                                                                                                                                                                   Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 11817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 6812339
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11817, Application US/09949016 Patent No. 6812339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 12
TYPE: DNA
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HYPOTHETICAL:
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Human
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91211 TTGACTTATGTAATAACCCACTACAGGTGTATCAGTATCTCCTGCAACTGTTATCCC 91267
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                                                                                                                                                                           4 PheCysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGlu------
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                                ArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyrPro 45
                                                                   CCTCCCATCCAGAATTAACAACTGTTAACATTTTGTCATATTTGCTTTCAGCATTTGTTG
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Matches:
Conservative:
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Search completed: August 19, Job time : 144 secs

2005, 10:23:20

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Pred. No.
is the number of results predicted by chance to have a
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OM protein - nucleic search, using frame_plus_p2n model
                                                                      Copyright
                                                                      GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
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Title: Perfect score: Scoring table: Run on: August 19, 2005, 03:05:35 ; Search time 622 Seconds US-10-614-934-14 MMIFCQGQKKINYRCNNSGE..... (without alignments)
470.034 Million cell updates/sec IRIYNTRAAKCINKTCNCYP

Xgapop 10.0 , Xgapext Ygapop 10.0 , Ygapext Fgapop 6.0 , Fgapext Delop 6.0 , Delext BLOSUM62 7.0

Searched: Total number of hits satisfying chosen parameters: 7316285 seqs, 3248459403 residues

14632570

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Command line parameters: p2n.model -DEV=xlp

-Q-/cgn2 1/USPTO spool p/US10614934/runat 17082005 181355 22021/app query.fasta 1.199
-DB=Published Applications NA -QFMT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS-bits -START=1 -END=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DCALIGN=200 -THR SCORE=pct -THR MXX=100
-THR MIN=0 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0
-MAXIEN=200000000 -USER=US10614934 @CCN 1 723 @runat 17082005 181355 22021
-NCPU=6 -TCPU=3 -NO MMAP -LARGSQUERY -NEG SCORES=0 -MAIT -DSPBLOCK=100
-LONGLOG -DEV\_TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database : Published\_Applications\_NA:\* 'cgn2\_6/ptodata/1/pubpna/US07\_PUBCOMB.seq:\*
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6/ptodata/1/pubpna/US08 NEW PUB.seq:\* 6/ptodata/1/pubpna/US09A PUBCOMB.seq:\*

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/cgn2 /cgn2 /cgn2 G/ptodata/1/pubpna/US10G\_PUBCOMB.seq:\*
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6/ptodata/1/pubpna/US11A\_PUBCOMB.seq:\*

2\_6/ptodata/1/pubpna/US11\_NEW\_PUB.seq:\* 2\_6/ptodata/1/pubpna/US60\_NEW\_PUB.seq:\* 2\_6/ptodata/1/pubpna/US60\_PUBCOMB.seq:\*

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	ö	Query Match	Length	DB	ID	ription
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16	۰.		9	19	-10-437-963	Sequence 33842, A
17	68.5		310	19	-10-319-914-	11,
	6	•	350570	20	-10-417-375-	146,
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C 24	65.5		377	20	-10-425-115-	166413,
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27	64		18	17	-10-104-047-	σı
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US-10-614-	934-]	.3 Applica	tion US	301/8	514934	
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GENERAL INFORMATION:
APPLICANT: HERRMANN, RAFAEL
APPLICANT: HONG, JAMES F.
APPLICANT: LU, ALBERT L.
APPLICANT: LEE, JIAN-MING
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1102
CURRENT APPLICATION NUMBER: US/10/614,934
CURRENT FILING DATE: 2003-07-08
PRIOR APPLICATION NUMBER: US/09/857,401
PRIOR FILING DATE: 2001-06-01 Publication No. US20050042717A1

PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24

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                                                                                           US-10-614-934-14 (1-45) x US-10-614-934-9 (1-114)
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US-10-614-934-9
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DB:
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Best Local Similarity:
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; ORGANISM: Leiurus quinquestriatus
US-10-614-934-13
                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: BB1102
CURRENT APPLICATION NUMBER: US/10/614,934
CURRENT FILING DATE: 2003-07-08
PRIOR APPLICATION NUMBER: US/09/857,401
PRIOR FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 27
SOFTWARE: Microsoft Office 97
SEQ ID NO 13
LENGTH: 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 9, Application US/10614934 Publication No. US20050042717A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                              SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: LU, ALBERT L.
APPLICANT: PRESNAIL, JAMES K.
APPLICANT: LEE, JIAN-MING
TITLE OF INVENTION: SCORPION TOXINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: HERRMANN, RAFAEL APPLICANT: WONG, JAMES F. APPLICANT: LU, ALBERT L. APPLICANT: PRESNAIL, JAMES
                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Leiurus
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32 ArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyrPro 45
                                10 AATGTGCCGTGCAAGAATTCTGGACAATGTCGTCCAGTTTGCATAAAAAGAGTAAATAAT 69
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                                                         AsnTyrArgCysAsnAsnSerGlyGluCysIleProHisCysIleArgIleTyrAsnThr 31
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APPLICANT: Herrman, Rafael
APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION UNMBER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
PRIOR APPLICATION NUMBER: 09/599,416
PRIOR APPLICATION NUMBER: 09/599,416
PRIOR FILING DATE: 2000-06-22
PRIOR PILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28
SOFTWARE: Microsoft Office 97
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                              US-10-044-359-5
; Sequence 5, Application US/10044359
; Publication No. US20020160454A1
                                                                                                                         APPLICANT: Wong, James F.
APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
PRIOR APPLICATION NUMBER: 09/599,416
PRIOR FILING DATE: 2000-06-22
PRIOR FILING DATE: 1999-06-22
PRIOR FILING DATE: 1999-06-22
PRIOR FILING DATE: 1999-06-22
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NUMBER OF SEQ ID NOS: 28
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; ORGANISM: Hottentotta judaica US-10-044-359-5
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US-10-044-359-3
                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Herrman, Rafael
APPLICANT: Wong, James F.
                                                                                    SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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                                                                                                         SOFTWARE: Microsoft Office 97
                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 186
TYPE: DNA
ORGANISM: Hottentotta judaica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                166 CGGTGCAACTGTTATCCG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     106 AATTGCGTAAAACCATGCTATGATAAATACGGCACAACTAAAACTAAATGCATCAACGAT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 GluCysIleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLys 39
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MetMetIlePheCysGlnGlyGlnLysLysIleAsnTyrArgCys---AsnAsnSerGly 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGTTATTTCGAGCCACGCTCAATACGAGTTGGATGTAACGTGTATGGGAGGAGCAGAT 105
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34.77%
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Matches:
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Best Local Similarity:
Query Match:
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Pred. No.:
                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY: unsure
; LOCATION: (88)
US-10-044-359-19
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Best Local Similarity:
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SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
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APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Herrman, Rafael APPLICANT: Wong, James F. APPLICANT: Lee, Jian-Ming
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PRIOR FILING DATE: 2000-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 174
TYPE: DNA
ORGANISM: Hottentotta judaica
FEATURE:
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                                                                                                                                     1 MetMetIlePheCysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGlu ::: ||| ::: ||| ::: |||
                                                                                                                     ATAATGATTTCAACCGAAGCTCAG---TTTATAGACGTGAAATGCACATCANCTAAGGAA
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TGCCGTTGTTAT 168
                   CysAsnCysTyr 44
                                                            CysIleProHisCysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThr 40
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Matches:
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Mismatches:
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Gaps:
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Matches:
Conservative:
Mismatches:
Indels:
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Sequence 356, Application US/09728446

Patent No. US20020081668A1

GENERAL INFORMATION:
APPLICANT: Friedrich, Glenn
APPLICANT: Sands, Arthur T.

APPLICANT: Sands, Arthur T.

APPLICANT: Cambrowicz, Brian
APPLICANT: Cambrowicz, Brian
APPLICANT: Cands Mutant Cells and Mutant Animals Defined Thereby
FILE OF INVENTION: and Mutant Cells and Mutant Animals Defined Thereby
FILE REFERENCE: LEX-0101-USA

CURRENT APPLICATION NUMBER: US/09/728,446

CURRENT FILING DATE: 1090-11-30
PRIOR APPLICATION NUMBER: US 60/168,270

PRIOR APPLICATION NUMBER: US 60/168,270

PRIOR FILING DATE: 1999-12-01

NUMBER OF SEQ ID NOS: 1461

SOFTWARE: FastSEQ for Windows Version 4.0

LENGTH: 231
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Best Local Similarity:
Query Match:
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US-09-728-446-356
Alignment Scores:
                                                                                                                                                                        APPLICANT: WONG, JAMES F.

APPLICANT: LU, ALBERT L.

APPLICANT: PRESNAIL, JAMES K.

APPLICANT: LEE, JIAN-MING

TITLE OF INVENTION: SCORPION TOXINS

FILE REFERENCE: BB1102

CURRENT APPLICATION NUMBER: US/10/614,934

CURRENT FILING DATE: 2003-07-08

PRIOR APPLICATION NUMBER: US/09/857,401

PRIOR APPLICATION NUMBER: US/09/857,401

PRIOR FILING DATE: 2001-06-01

PRIOR PILING DATE: 1998-12-02

NUMBER OF SEQ ID NOS: 24

CONTENTAL METALORY OF THE PRIOR PILING DATE: 1998-12-02

NUMBER OF SEQ ID NOS: 24
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                                                                                                             SEQ ID NO 15
LENGTH: 18(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 15, Application US/10614934
Publication No. US20050042717A1
GENERAL INFORMATION:
APPLICANT: HERRMANN, RAFAEL
                                                                                          TYPE: DNA
                                                                                                                                                       SOFTWARE: Microsoft Office 97
                                                                ORGANISM: Leiurus quinquestriatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     144 TGTTTCCCATTTTGTGTGGGAAGATATAATCCCATCTTCTATAATTGCCCAACTAGTAAAT 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41 CysAsnCysTyr 44
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                                                                                                               180
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Matches:
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RESULT 9
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DB:
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US-10-614-934-11
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DB:
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Best Local Similarity:
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                                                                                                                          Sequence 15, Applicate Publication No. US200 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 11
APPLICANT: Herrman, Rafael
APPLICANT: Wong, James F.
APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION UNMEER: US/10/044,359
CURRENT FILING DATE: 2002-01-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US/09/857,401
PRIOR FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: WONG, JAMES F.
APPLICANT: LU, ALBERT L.
APPLICANT: PRESNAIL, JAMES K.
APPLICANT: LEE, JIAN-MING
TITLE OF INVENTION: SCORPION TOXINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: HERRMANN, RAFAEL APPLICANT: WONG, JAMES F. APPLICANT: LU, ALBERT L. APPLICANT: PRESNAIL, JAMES APPLICANT: LEE, JIAN-MING
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CURRENT FILING DATE: 2003-07-08
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                                                                                                                                                                                                                                                                                                           58 TGTACTACATCTAAAGAATGTTGGTCGGTTTGTGAGACATTGTATAAGACCACCAGAGGA 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35 LysCysIleAsnLysThrCysAsnCysTyr 44
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGTGCATCTGATCAATGTTGGTTGGTTTGTCAAAACTTGTATAAAACACTCAATGCA 144
                                                                                                                                                              Application US/10044359
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                                                                                                                                       US-10-614-934-14 (1-45) x US-10-614-934-1 (1-177)
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                 Alignment Scores:
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US-10-614-934-1
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                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/10614934 Publication No. US20050042717A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Microsoft Office 97
SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/614,934
CURRENT FILING DATE: 2003-07-08
PRIOR APPLICATION NUMBER: US/09/857,401
PRIOR FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 60/110,590
PRIOR FILING DATE: 1998-12-02
NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: PRESNAIL, JAMES K.
APPLICANT: LEE, JIAN-MING
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: HERRMANN, RAFAEL APPLICANT: WONG, JAMES F. APPLICANT: LU, ALBERT L.
                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 28
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PRIOR FILING DATE: 2000-06-22
PRIOR APPLICATION NUMBER: 60/140,227
PRIOR FILING DATE: 1999-06-22
                                                                                                                                                                                                                                                                                                                                                        LENGTH: 17
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LU, ALBERT L.
PRESNAIL, JAMES K.
LEE, JIAN-MING
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                               CysIleArgIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyr 44
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TGCAGAAAAGTAACAGGATCGGGACAAGGAAAATGCCCAGAATAATCAATGTCGCTGCTAT 174
                                                                    TGTAGTGAAGCTGGACTCATAGACGTAAGATGTTTTGCATCTCGTGAATGTTTGGGAAGCT 114
                                                                                                   CysGlnGlyGlnLysLysIleAsnTyrArgCysAsnAsnSerGlyGluCysIleProHis 24
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Best Local Similarity:
Query Match:
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US-10-425-114-17548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53)13)B

CURRENT APPLICATION NUMBER: US/10/425,114

CURRENT FILING DATE: 2003-04-28

NUMBER OF SEQ ID NOS: 73128

SEQ ID NO 17548

LENGTH: 905
                                                                                                                                                                                                                                                                                                               Sequence 23882, Application US/10425114 Publication No. US20040034888A1 GENERAL INFORMATION:
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                                  SEQ ID NO 23882
LENGTH: 1405
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APPLICANT:
                                                                     APPLICANT: Zhou, Yihua APPLICANT: Kovalic, David K.
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(5331)B
CURRENT FILING DATE: 2003-04-28
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
                                                                                                                                                                                                                                                                          APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua
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ORGANISM: Zea mays
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ORGANISM: Zea mays
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Kovalic, David K.
Screen, Steven E
Tabaska, Jack E
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Matches:
Conservative:
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KOVALIC, LIDOMAS J.

APPLICANT: Zhou, Yihua

APPLICANT: Cao, Yongwei

TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With

FILE REPERENCE: 38-21(53222)B

CURRENT APPLICATION NUMBER: US/10/425,115

CURRENT FILLE GATE: 2003-04-28

NUMBER OF SEQ ID NOS: 369326

SEQ ID NO 38932

LENGTH: 1770

TYPE: DNA

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Query Match:
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; OTHER INFORMATION:
US-10-425-114-23882
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Best Local Similarity:
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                             TGCTGCGGCAAGTTGTCAAAGGCCTCCCCAGAAAATGGATCAACCGGGTCCAGTGGCCGA 1262
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--IleargIleTyrAsnThrArgAlaAlaLysCysIleAsnLysThrCys
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Conservative:
Mismatches:
Indels:
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Conservative:
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RESULT 15
US-10-044-359-17
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Best Local Similarity:
Query Match:
DB:
APPLICANT: Herrman, Rafael
APPLICANT: Wong, James F.
APPLICANT: Lee, Jian-Ming
TITLE OF INVENTION: SCORPION TOXINS
FILE REFERENCE: BB1367 US NA
CURRENT APPLICATION NUMBER: US/10/044,359
CURRENT APPLICATION NUMBER: 09/599,416
PRIOR APPLICATION NUMBER: 09/599,416
PRIOR FILING DATE: 2000-06-22
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 60/140,227
PRIOR APPLICATION NUMBER: 60/140,227
PRIOR TILING DATE: 1999-06-22
NUMBER OF SEQ ID NOS: 28
SOFTWARE: Microsoft Office 97
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; OTHER INFORMATION:
US-10-425-115-38929
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US-10-425-115-38929
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APPLICANT: Kovalic, David K.
APPLICANT: Cao, Yinua
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(5322)B
CURRENT FILING NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 38929
LENGTH: 2525
TYPE: DNA
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                 Sequence 17, Application US/10044359
Publication No. US20020160454A1
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                               2022 GGATGCCAT 2030
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1902 TGCTGCGGCAAGTTGTCAAAGGCCTCCCCAGAAAATGGATCAACCGGGTCCAGTGGCCGA 1961
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                                                                              31 ThrArgAlaAlaLysCysIleAsnLysThrCysAsnCysTyr 44
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